



SHEET 2 OF 6

FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 2997-1-2-1-1-DIV	SERIAL NO. 08/918,325
	APPLICANT BARCLAY	
	FILING DATE August 26, 1997	GROUP ART 1761

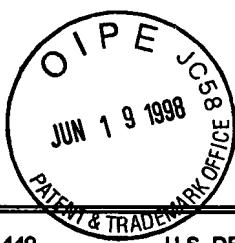
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
						YES	NO
Arv	AQ WO 89/00606 /	1/26/89	PCT WO	—	—		
Arv	AR WO 88/10112 /	12/29/88	PCT WO	—	—		
Arv	AS 60-105471	10/6/85	JAPAN	—	—		
Arv	AT 58-213613	6/10/85	JAPAN	—	—		
Arv	AU 58-196068	5/17/85	JAPAN	—	—		
Arv	AV WO 92/12711 /	08/06/92	PCT WO	—	—		
Arv	AW WO 91/14427 /	10/03/91	PCT WO	—	—		
Arv	AX 0 231 904 A2 /	08/12/87	EPO	—	—		

OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

Arv	AY	Ainsworth, "Introduction and Keys to Higher Taxa.", pp. 1-7, 1973, in <i>The Fungi. An Advanced Treatise</i> , Vol. 4B, (G.C. Ainsworth et al. eds., Academic Press)
Arv	AZ	Bahnweg et al., "A New Approach to Taxonomy of the Thraustochytriales and Labyrinthulales", pp. 131-140, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
Arv	BA	Bartnicki-Garcia, "The Cell Wall: A Crucial Structure in Fungal Evolution", pp. 389-403, 1988, in <i>Evolutionary Biology of the Fungi</i> , (A.D.M. Rayner et al. eds., Cambridge University Press)
Arv	BB	Behrens et al., "Eicosapentaenoic Acid from Microalgae", p. 623, col. 2, abstract no. 193025d, 1989, Chemical Abstracts, Vol. 111, No. 21, Nov. 20.
Arv	BC	Cavalier-Smith, "The Origin of Nuclei and of Eukaryotic Cells", pp. 463-468, 1975, <i>Nature</i> , Vol. 256
Arv	BD	Cerda-Olmeda et al., "A Biography of Phycomyces", pp. 7-26, 1987, in <i>Phycomyces</i> , (Cerda-Olmeda et al. eds., CSH Laboratory)
Arv	BE	Couch et al., 1973, <i>Lipids</i> , 8(7):385-392
Arv	BF	Cruickshank, 1934, "Studies in Fat Metabolism in the Fowl" in <i>Biochem. J.</i> , 28:965-977

EXAMINER	Anthony Weier	DATE CONSIDERED	12/9/98	updated 8/1/99
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SHEET 3 OF 6

FORM PTO-1449	U. S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 2997-1-2-1-1-DIV	SERIAL NO. 08/918,325
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT BARCLAY	RECEIVED JUN 23 1998 USPTO
		FILING DATE August 26, 1997	GROUP ART 1761

<i>An</i>	BG	Dick, "Saprolegniales", pp. 113-144, 1973, in <i>The Fungi. An Advanced Treatise</i> , (G.C. Ainsworth et al. eds., Academic Press))
<i>An</i>	BH	Ellenbogen, "Polyunsaturated Fatty Acids of Aquatic Fungi: Possible Phylogenetic Significance", pp. 805-811, 1969, <i>Comp. Biochem. Physiol.</i> , Vol. 29
<i>An</i>	BI	Emerson, "Current Trends of Experimental Research in the Aquatic Phycomycetes", pp. 169-200, 1950, <i>Ann. Rev. Micro.</i> , Vol. 4
<i>An</i>	BJ	Erwin, "Comparative Biochemistry of Fatty Acids in Eukaryotic Microorganisms", pp. 41-143, 1973, in <i>Lipids and Biomembranes of Eukaryotic Microorganisms</i> , (J. Erwin ed., Academic Press)
<i>An</i>	BK	Findlay et al., "Biochemical Indicators of the Role of Fungi and Thraustochytrids in Mangrove Detrital Systems", pp. 91-103, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
<i>An</i>	BL	Fisher et al., 1957, <i>J. Nutr.</i> , 63:119-129
<i>An</i>	BM	Fuller, et al., "Isolation and Pure Culture Study of Marine Phycomycetes", pp. 745-756, 1964, <i>Mycologia</i> , Vol. 56
<i>An</i>	BN	Gellerman et al., "Methyl-Directed Desaturation of Arachidonic to Eicosapentaenoic Acid in the Fungus, <i>Saprolegnia Parasitica</i> ", pp. 23-30, 1979, <i>Biochim. Biophys. Acta</i> , Vol. 573
<i>An</i>	BO	Goldstein, "Development and Nutrition of New Species of Thraustochytrium", pp. 271-279, 1963, <i>Am. J. Bot.</i> , Vol. 50
<i>An</i>	BP	Goldstein et al., "Biology of a Problematic Marine Fungus, Dermocystidium sp. II. Nutrition and Respiration", pp. 468-472, 1969, <i>Mycologia</i> , Vol. 61
<i>An</i>	BQ	Goldstein et al., "Biology of a Problematic Marine Fungus, Dermocystidium sp. I. Development and Cytology", pp. 1-11, 1966, <i>Archiv für Mikrobiologie</i> , Vol. 53.1
<i>An</i>	BR	Henderson et al., "Lipid Composition and Biosynthesis in the Marine Dinoflagellate <i>Cryptocodinium Cohnii</i> ", pp. 1679-1683, 1988, <i>Phytochemistry</i> , Vol 27. No. 6
<i>An</i>	BS	Hori et al., "The Nucleotide Sequence of 5S rRNA from a Cellular Slime Mold <i>Dictyostelium Discoideum</i> ", pp. 5535-5539, 1980, <i>Nucl. Acids Res.</i> , Vol. 8
<i>An</i>	BT	Hunter, "Fish Oil and Other Omega-3 Sources", pp. 1592-1596, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
<i>An</i>	BU	Jong et al., "American Type Culture Collection Catalogue of Fungi/Yeast", pp. 350 and 378, <i>American Type Culture Collection</i> , 17th Edition, 1987.
<i>An</i>	BV	Kates, "Techniques of Lipidology: Isolation, Analysis and Identification of Lipids", pp. 186-278, 1986, <i>Laboratory Techniques in Biochemistry and Molecular Biology</i> , Vol. 3
<i>An</i>	BW	Kyle, "Microalgae as a Source of EPA-Containing Oils", p. 1251, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
<i>An</i>	BX	Lepage et al., "Improved Recovery of Fatty Acid Through Direct Transesterification Without Prior Extraction or Purification", pp. 1391-1396, 1984, <i>J. Lipid Res.</i> , Vol. 25

EXAMINER	<i>Anthony Wiley</i>	DATE CONSIDERED	<i>12/9/98 updated 8/2/98</i>
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SHEET 4 OF 6

FORM PTO-1449  INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 2997-1-2-1-1-DIV	SERIAL NO. 08/918,325
	APPLICANT BARCLAY		
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<i>BY</i>	Lipstein et al., "The Nutritional and Economic Value of Algae for Poultry" in <i>Algae Biomass</i> , G. Shelef and C.J. Soeder, eds., Elsevier/North-Holland Biomedical Press, 1980, pp. 667-685
<i>BZ</i>	Lipstein et al., 1980, <i>Br. Poultry Sci.</i> , 21:9-21
<i>CA</i>	Mannella et al., "Interrelatedness of 5S RNA Sequences Investigated by Correspondence Analysis", pp. 228-235, 1987, <i>J. Mol. Evol.</i> , Vol. 24
<i>CB</i>	Miller, "Isolation and Pure Culture of Aquatic Phycomycetes by Membrane Filtration", pp. 524-527, 1967, <i>Mycologia</i> , Vol. 59
<i>CC</i>	Moss, "Biology and Phylogeny of the Labrithulales and Thraustochytriales", pp. 105-129, 1986, in <i>The Biology of Marine Fungi</i> , (S.T. Moss ed., Cambridge University Press)
<i>CD</i>	Murty et al., 1961, <i>J. Nutrition</i> , 75:287-294
<i>CE</i>	Navarro et al., 1972, <i>J. Sci. Fd. Agric.</i> , 23:1287-1292
<i>CF</i>	Perkins, "Phylogenetic Considerations of the Problematic Thraustochytraceous-Labrinthulid-Dermocystidium Complex Based on Observations of Fine Structure", pp. 45-63, 1974, <i>Veroff. Inst. Meeresforsch. Bremerh. Suppl.</i> , Vol. 5
<i>CG</i>	Pigot, "The Need to Improve Omega-3 Content of Cultured Fish", pp. 63-68, 1989, <i>World Aquaculture</i> , Vol. 20
<i>CH</i>	Pohl et al., "Fatty Acids and Lipids of Marine Algae and the Control of Their Biosynthesis by Environmental Factors", pp. 473-523, 1979, <i>Marine Algae in Pharmaceutical Science</i> , (Hoppe et al. eds.)
<i>CI</i>	Reiser, 1951, <i>J. Nutrition</i> , 44:159-175
<i>CJ</i>	Ryther, "Cultivation of Macroscopic Marine Algae", pp. 79-88, 1983, <i>Solar Energy Research Institute Aquatic Species Program Review</i> . Proc of the March 1983 Principal Investigators Meeting, SERI/CP-231 1946
<i>CK</i>	Schlenk, "Urea Inclusion Compounds of Fatty Acids", pp. 243-267, 1954, <i>Prog. Chem. Fats and Other Lipids</i> , Vol. 2
<i>CL</i>	Schneider, "Cultivation of Micro-organisms. Section 3.2: Fungi", pp. 337-345, 1976, in <i>Marine Ecology</i> , Vol. 3, Part 1. <i>Cultivation</i> , (O. Kinne ed., Wiley and Sons)
<i>CM</i>	Simopoulos et al. (eds.), <i>Health Effects of Polyunsaturated Fatty Acids in Seafoods</i> , Chaps. 2-5, 7, 17, 1986, Academic Press)
<i>CN</i>	Sorokin, "Dry Weight, Packed Cell Volume and Optical Density", pp. 321-343, 1973 in <i>Handbook of Phycological Methods: Culture Methods and Growth Measurements</i> , (J.R. Stein ed., Cambridge University Press)
<i>CO</i>	Sparrow, <i>Aquatic Phycomycetes</i> , pp. 36-39, 1960, University of Michigan Press
<i>CP</i>	Wassef, "Fungal Lipids", pp. 159-232, 1977, <i>Adv. Lipid Res.</i> , Vol. 15
<i>CQ</i>	Weete, "Fatty Acids", pp. 49-95, 1980, in <i>Lipid Biochemistry of Fungi and Other Organisms</i> , (Plenum Press)

EXAMINER <i>Anthony Weier</i>	DATE CONSIDERED 12/4/98	GROUP 10
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

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SHEET 5 OF 6

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<i>AN</i>	CR	Yamada et al., "Production of Arachidonic Acid and Eicosapentaenoic Acid by Microorganisms", p. 1254, 1987, <i>J. Am. Oil Chem. Soc.</i> , Vol. 64
<i>AN</i>	CS	Akimoto et al., "Metal Salts Requisite for the Production of Eicosapentaenoic Acid by a Marine Bacterium Isolated from Mackerel Intestines", pp. 504-508, 1991, <i>JAOCS</i> , Vol. 68, July.
<i>AN</i>	CT	Ando et al., "Incorporation of n-3 Polyunsaturated Fatty Acids into Phospholipids of a Marine Bacterium <i>Vibrio</i> sp. Cultivated with Sardine Oil", pp. 169-171, 1992, <i>J. Ferm. Bioeng.</i> , Vol. 73.
<i>AN</i>	CU	Bajpai et al., "Production of Docosahexaenoic Acid by <i>Thraustochytrium aureum</i> ", pp. 706-710, 1991, <i>Appl. Microbiol. Biotechnol.</i> , Vol. 35.
<i>AN</i>	CV	Bajpai et al., "Effects of Aging <i>Mortierella</i> Mycelium on Production of Arachidonic and Eicosapentaenoic Acids", pp. 775-780, 1991, <i>JAOCS</i> , Vol. 68, October.
<i>AN</i>	CW	Bajpai et al., "Optimization of Production of Docosahexaenoic Acid (DHA) by <i>Thraustochytrium aureum</i> ATCC 34304", pp. 509-514, 1991, <i>JAOCS</i> , Vol. 68, July.
<i>AN</i>	CX	Bajpai et al., "Eicosapentaenoic Acid (EPA) Formation; Comparative Studies with <i>Mortierella</i> Strains and Production by <i>Mortierella elongata</i> ", pp. 1294-1298, 1991, <i>Mycol. Res.</i> , Vol 95.
<i>AN</i>	CY	Boswell et al., "SCO Production by Fermentative Microalgae", pp. 274-286, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<i>AN</i>	CZ	Cohen et al., "Overproduction of $\gamma$ -Linolenic and Eicosapentaenoic Acids by Algae", pp. 569-572, 1992, <i>Plant Physiol.</i> , Vol. 98.
<i>AN</i>	DA	Gandhi et al., "Production of the Polyunsaturated Fatty Acids Arachidonic Acid and Eicosapentaenoic Acid by the Fungus <i>Pythium ultimum</i> ", pp. 1825-1830; 1991, <i>J. Gen. Microbiol.</i> , Vol 137.
<i>AN</i>	DB	Hansen et al., "Effects of Culture Conditions on Accumulation of Arachidonic and Eicosapentaenoic Acids in Cultured Cells of <i>Rhytidadelphus squarrosus</i> and <i>Eurychilum striatum</i> ", pp. 1837-1841, 1991, <i>Phytochemistry</i> , Vol. 30.
<i>AN</i>	DC	Kendrick et al., "Microbial Polyunsaturated Fatty Acids of Potential Commercial Interest", pp. 59-65, 1992, <i>SIM Industrial Microbiology NEWS</i> , Vol. 42.
<i>AN</i>	DD	Kendrick et al., "Lipids of Selected Molds Grown for Production of n-3 and n-6 Polyunsaturated Fatty Acids", pp. 15-20, 1992, <i>LIPIDS</i> , Vol. 27.
<i>AN</i>	DE	Kyle et al., "Bioproduction of Docosahexaenoic Acid (DHA) by Microalgae", pp. 287-300, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<del>AN</del>	DF	Kyle et al., "Microalgae as a Source of EPA-Containing Oils", pp. 117-121, 1988, <i>Proc. World Conf. Biotechnol. Fats Oils Ind.</i>
<i>AN</i>	DG	Radwan, "Sources of C <sub>20</sub> -Polyunsaturated Fatty Acids for Biotechnical Use", pp. 421-430, 1991, <i>Appl. Microbiol. Biotechnol.</i> , Vol. 35.

EXAMINER <i>Anthony Wier</i>	DATE CONSIDERED <i>12/4/98 updated 8/2/99</i>
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### U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROP.
<i>dw</i>	AA	5,415,879	5/16/95	Oh	—	—	
	AB	5,234,699	8/10/93	Yeo	—	—	
	AC	5,012,761	5/7/91	Oh	—	—	
	AD	4,792,418	12/20/88	Rubin et al.	—	—	
	AE	4,758,438	7/1988	Stroz et al.	—	—	
	AF	4,304,794	12/1981	Dwivedi et al.	—	—	
	AG	3,924,017	12/1975	Lee et al.	—	—	
	AH	3,908,028	9/1975	Neely et al.	—	—	
	AI	3,908,026	9/1975	Neely et al.	—	—	
	AJ	3,667,969	6/1972	Kracauer	—	—	
<i>An</i>	AK	3,647,482	3/1972	Yueh	—	—	
<i>An</i>	AL	3,296,079	1/1967	Griffin	—	—	
<i>An</i>	AM	5,130,242	07/14/92	Barclay	—	—	
<i>An</i>	AN	4,670,285	06/02/87	Clandinin et al.	—	—	
<i>An</i>	AO	5,340,742	08/23/94	Barclay	—	—	
<i>An</i>	AP	5,340,594	08/23/94	Barclay	—	—	

### FOREIGN PATENT DOCUMENTS

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<i>An</i>	DH	Yazawa et al., "Production of Eicosapentaenoic Acid from Marine Bacteria", pp. 29-51, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<i>An</i>	DI	Yongmanitchai et al., "Screening of Algae for Potential Alternative Sources of Eicosapentaenoic Acid", pp. 2963-2967, 1991, <i>Phytochemistry</i> , Vol. 30.
<i>An</i>	DJ	Yamada et al., "Production of Dihomo- $\gamma$ -Linolenic Acid, Arachidonic Acid and Eicosapentaenoic Acid by Filamentous Fungi", pp. 118-138, 1992, in <i>Industrial Applications of Single Cell Oils</i> (Kyle et al., eds.), American Oil Chemists' Society, Champaign, IL.
<i>An</i>	DK	Yongmanitchai et al., "Omega-3 Fatty Acids: Alternative Sources of Production", pp 117-125, 1989, <i>Proc. Biochem.</i> .

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